

REMARKS

Claims 1, 2 and 4-15 are pending in this application. By this Amendment, the specification and claims 1, 2, 4-9 are amended, and claims 10-15 are added. No new matter is added. Reconsideration of the application is respectfully requested.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Eshete during the July 6 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

The Examiner is requested to consider the information submitted in the Information Disclosure Statement filed on May 26, 2005.

Claims 1-3, 5, 6, 8 and 9 are rejected under 35 U.S.C. §102(e) over U.S. Patent Application No. 2002/0107633 to Iwasaki et al. ("Iwasaki"). The rejection of claim 3 is rendered moot by the cancellation of claim 3, and the rejection of the remaining claims is respectfully traversed.

As agreed during the personal interview, Iwasaki fails to disclose or suggest the combination of features recited in each of independent claims 1 and 8 including, *inter alia*, calculating an actual amount of intake air based on the equation $G_a = G_{ao} + (G_{ac} - G_{ao}) \times K$, where G_a is the actual amount of intake air, G_{ao} is the first estimated value, G_{ac} is the second estimated value and K is a weighting factor, as recited in amended claims 1 and 8.

As discussed during the personal interview, Iwasaki fails to disclose or suggest the combination of features recited in each of amended claims 2 and 9 including, *inter alia*, calculating the actual amount of intake air based on the first estimated value, the second estimated value and the weighting factor, wherein the weighting factor is based on at least one weighting sub-factor that is based on a change in at least one of a current set amount of opening of the intake valve, an opening timing of the intake valve, a closing timing of the

intake valve, a current intake pressure, and a current engine rotation speed, from the time of opening the intake valve to the time of closing the intake valve.

Iwasaki discloses detecting closing timing IVC of the intake valve 5, opening timing IVO of the intake valve 5 and closing timing EVC of the exhaust valve 6. Based on the detected closing timing IVC, opening timing IVO and closing timing EVC, the device of Iwasaki determines IVT cylinder volume VC1 at intake valve closing timing IVC. (paragraphs [0043] - [0048]). An in-cylinder fresh air rate η is determined from the intake valve opening timing IVO and exhaust valve closing timing EVC, and the EGR rate, as needed. Iwasaki fails to disclose or suggest, *inter alia*, that any of the variables or factors are based on a change occurring from the time of opening the intake valve to the time of closing the intake valve, in at least one of a current set amount of opening of the intake valve, an opening timing of the intake valve, a closing timing of the intake valve, a current intake pressure, and a current engine rotation speed.

For at least these reasons, Applicants submit that Iwasaki fails to disclose or suggest all the features recited in independent claims 1, 2, 8 and 9, as well as the features recited in dependent claims 5 and 6. It is requested that the rejection be withdrawn.

Claim 7 is rejected under 35 U.S.C. §103(a) over Iwasaki in view of JP 4166633 (JP'633). The rejection is respectfully traversed.

Neither an English translation nor an English Abstract of JP'633 was provided to the Applicants by the Examiner in support of the rejection of claim 7. M.P.E.P. 706.02 states "If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection." Accordingly, in the event that the rejection of claim 7 is maintained and/or other claims are rejected based on JP '633 in a future Office Action, it is respectfully requested that any such Office Action not be made "Final".

Applicants obtained an English Abstract of JP'633 and traverse the rejection in view of the English Abstract. JP'633 fails to overcome the deficiencies of Iwasaki, as applied to claim 2, from which claim 7 depends. For at least this reason, Applicants submit that JP'633 fails to overcome the deficiencies of Iwasaki, as applied to claim 2, from which claim 7 depends. Thus, the combination of Iwasaki and JP'633 fails to disclose or suggest all the features of claim 7. It is respectfully requested that the rejection be withdrawn.

Claim 4 is rejected under 35 U.S.C. § 103(a) over Iwasaki in view of JP'633 and further in view of U.S. Patent No. 6,792,901 to Sugiyama et al. ("Sugiyama"). The rejection is respectfully traversed.

Sugiyama fails to overcome the deficiencies of Iwasaki, as applied to claim 2, from which claim 4 depends. For at least these reasons, Applicants submit that the combination of Sugiyama and Iwasaki fails to disclose or suggest all the features of claim 4. It is respectfully requested that the rejection be withdrawn.

Further, new claims 10-15 also depend from one of claims 1, 2, 8 and 9, and thus are patentable over the applied references for at least the reasons discussed above with regard to independent claims 1, 2, 8 and 9.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Maryam M. Ipakchi
Registration No. 51,835

JAO:MMI/aaw

Attachment:
Petition for Extension of Time

Date: July 15, 2005

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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